

Please add the following new claim:

34. (NEW) A band-pass filter having a pair of band-pass filter input terminals and plural pairs of band-pass filter output terminals, comprising:

a pair of SAW filters having respective pass bands, a pair of input terminals, a pair of output terminals and at least one SAW filter comprising a plurality of SAW resonators connected in a multiple ladder structure formed by series arms and parallel arms;

the pair of band-pass filter input terminals being commonly connected to the respective pairs of input terminals of the pair of SAW filters; and

the plurality of pairs of band-pass filter output terminals being connected to the respective pairs of output terminals of the pair of SAW filters.

REMARKS

In the Office Action the Examiner noted that claims 1, 6 and 22-33 were pending in the application. The Examiner allowed claims 1, 6 and 24-33, while rejecting claims 22 and 23. By this Amendment, various claims have been amended and new claim 34 has been added. Thus, claims 1-6, and 22-34 are pending in the application. The Examiner's rejections are traversed below.

Objection to the Specification

The specification has been amended in accordance with the Examiner's suggested changes on pages 2 and 3 of the Office Action, as updated to include a recently issued patent number for application number 09/314,943.

Objection to Claims 6 and 33

Claim 6 and 33 have been amended based on the comments made by the Examiner in item 4 on page 3 of the Office Action.

Rejection Under 35 U.S.C. §251

In item 5 on page 4 of the Office Action the Examiner rejected claims 22 and 23 under 35 U.S.C. §251 as being directed to an error not correctable by reissue. Claims 22 and 23 have

been amended so that they have a scope which is different from claims 5 and 6 of U.S. Patent 5,559,481. Therefore, it is submitted that claims 22 and 23 meet the requirements of 35 U.S.C. §251.

New Claim 34

New claim 34 is similar to claim 6 in that it recites "a band-pass filter having a pair of SAW filters." However, the recitation of the features of the pair of SAW filters in claim 34 is different from that of claim 6. Claim 34 does recite "a multiple ladder structure formed by series arms and parallel arms."

It is submitted that claim 34 patentably distinguishes over the prior art.

Information Disclosure Statement

Applicants are submitting an Information Disclosure Statement together with copies of two European Search Reports for the Examiner's consideration. It is requested that these documents be made of record in the subject application.

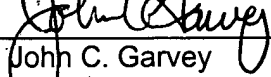
Summary

It is submitted that the claims, as amended, are all in condition for allowance. Reconsideration of the claims and an early notice of allowance are earnestly solicited.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION:**

Please amend the specification as follows. Please note that the bracketing and underlining are provided under 37 CFR §1.173(d):

Please insert before the first sentence the following:

This application and copending Application No. 09/314,943, filed May 20, 1999 (now U.S. Patent 37,799), are each reissues of U.S. Patent No. 5,631,612 (Application No. 08/369,492, filed January 6, 1995).

Please replace the current Cross Reference to Related Applications paragraph on Page 1 of the specification with the following:

Cross Reference to Related Applications

[This application is a continuation of application number 07,965,774, filed October 23, 1992, now U.S. Patent No. 5,559,481 patented September 24, 1996.] This application is a continuation of application number 09/314,943, filed May 20, 1999, now U.S. Patent No. RE 37,390, the contents of which are hereby incorporated by reference, which is a reissue of U.S. Patent number 5,631,612 (Application No. 08/369,492, filed January 6, 1995), which is a continuation of application number 07/965,774, filed October 23, 1992, now U.S. Patent No. 5,559,481. This application is related to application number 09/158,074, filed September 22, 1998, now U.S. RE 37,375, which is a reissue of U.S. Patent No. 5,559,481.

IN THE CLAIMS:

Please delete claims 1-3.

Please amend claims 6, 22, 23 and 33 as follows below:

6. (TWICE AMENDED) A band-pass filter having a pair of band-pass filter input terminals and plural pairs of band-pass filter output terminals, comprising:

[a pair of SAW filters having respective, different pass bands and each SAW filter having a pair of SAW filter input terminals and a pair of SAW filter output terminals and comprising a plurality of one-port SAW resonators connected in a ladder structure between the input and

output terminals and including at least a first stage having a series-arm SAW resonator connected to one of the pair of input terminals;]

a pair of SAW filters having respective pass bands and comprising a plurality of one-port SAW resonators connected in a multiple ladder structure, each having at least a first stage located at a side of the pair of band-pass filter input terminals and a series-arm resonator located at the first stage, a pair of input terminals and a pair of output terminals;

the pair of band-pass filter input terminals being commonly connected to the respective pairs of input terminals of the pair of SAW filters;

the plurality of pairs of band-pass filter output terminals being connected to the respective pairs of output terminals of the pair of SAW filters.

22. (ONCE AMENDED) A SAW filter comprising:

a first SAW resonator having a pair of terminals and a predetermined resonance frequency (frp), said first SAW resonator being provided in a parallel arm of the SAW filter on a LiTaO₃ substrate; and

a second SAW resonator having a pair of terminals and a predetermined resonance frequency (frs) approximately equal to a predetermined antiresonance frequency of the first SAW resonator (fap), said second SAW resonator being provided in a series arm of the SAW filter on the LiTaO₃ substrate; and

an inductance element connected in series with the first SAW resonator in the parallel arm, the inductance element functioning to increase the admittance of the parallel arm and decrease the resonance frequency, wherein

the first SAW resonator comprises an exciting interdigital electrode and first and second reflectors, each of which comprises either aluminum or an aluminum alloy containing a few weight percentage of metal, other than aluminum; and

the respective film thicknesses of the exciting interdigital electrode and the first and second reflectors are in a range of from 0.06 to 0.09 times the period of the exciting interdigital electrode.

23. A SAW filter comprising:

a first SAW resonator having a pair of terminals and a predetermined resonance frequency (frp), said first SAW resonator being provided in a parallel arm of the SAW filter on a

LiTaO₃ substrate; and

a second SAW resonator having a pair of terminals and a predetermined resonance frequency (frs) approximately equal to a predetermined antiresonance frequency of the first SAW resonator (fap), said second SAW resonator being provided in a series arm of the SAW filter on the LiTaO₃ substrate; and

an inductance element connected in series with the first SAW resonator in the parallel arm, the inductance element functioning to increase the admittance of the parallel arm and decrease the resonance frequency, wherein

the first SAW resonator comprises an exciting interdigital electrode and first and second reflectors, each of which comprises either gold or a gold alloy containing a few weight percentage of metal other than gold; and the respective film thicknesses of the exciting interdigital electrode and the first and second reflectors are in a range of from 0.0086 to 0.013 times the period of the exciting interdigital electrode.

33. The band-pass filter as claimed in claim 32, further comprising a capacitance element connected in series between the inductance element and the first stage of the second SAW filter.

Please add the following new claim:

34. (NEW) A band-pass filter having a pair of band-pass filter input terminals and plural pairs of band-pass filter output terminals, comprising:

a pair of SAW filters having respective pass bands, a pair of input terminals, a pair of output terminals and at least one SAW filter comprising a plurality of SAW resonators connected in a multiple ladder structure formed by series arms and parallel arms;

the pair of band-pass filter input terminals being commonly connected to the respective pairs of input terminals of the pair of SAW filters; and

the plurality of pairs of band-pass filter output terminals being connected to the respective pairs of output terminals of the pair of SAW filters.